

REMARKS

This application has been reviewed in light of the Office Action dated April 16, 2008. Claims 1-26 are in this application, of which Claims 12-20, 22, 224 and 26 have been withdrawn from consideration as being drawn to a non-elected invention.^{1/} Of the claims under examination, Claims 1 and 21 are in independent form. Claims 1, 21, 23 and 25 have been amended to define still more clearly what Applicant regards as his invention. Favorable reconsideration is requested.

In the Office Action, Claims 23 and 25 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. These claims have been amended into a form specifically authorized by the MPEP, and accordingly, withdrawal of this rejection is respectfully requested..

In addition, Claims 1-12 were rejected under 35 U.S.C. § 102 as being anticipated by EPA 0 982 931 A1 (Berthelot et al.).^{2/} For the following reasons, however, Applicants believe that Claims 1 and 21, and the claims dependent therefrom, are allowable over that document.

Independent Claim 1 is directed to a method of forming a compressed transcoded digital image signal from a compressed original digital image signal which comprises digital data organized in blocks, the compression of the original signal comprising at least one step of spatio-frequency transformation of this signal and a step of coding the data blocks of the transformed signal. The claimed method comprises selecting

^{1/} Applicant understands that Claim 21 is actually included in the elected invention, as it was so listed in the Restriction Requirement, and is an apparatus claim corresponding to method Claim 1.

^{2/}Again, it is understood that this rejection applies to Claims 21, 23 and 25, as well.

a data block in one of the compressed signals, and identifying, in the other compressed signal, a so-called dual data block which corresponds to the data block selected having regard to a given geometric transformation applied to this block. The method also comprises decoding the data block belonging to the compressed original signal, applying the given geometric transformation to the data block thus decoded, coding the geometrically transformed data block, and inserting the first data block thus coded in the compressed transcoded image signal at the position of its dual block.

Berthelot relates to a method for the geometric transcoding of a compressed data file containing a digital signal of dimension N coded by means of a coding method including at least one step of spectral breakdown into frequency sub-bands of the digital signal. As depicted in figure 1 and mentioned from paragraph 51 (page 5) to paragraph 77 (page 7), the digital signal is breakdown into sub-bands (step 2), quantized (step 3) and entropically coded (step 4).

In step 5, indicators are entered in the compressed file F. These indicators are in the form of supplementary bits having initial values representing a normal order of the coefficients of the signal of the frequency sub-bands in a direction associated with these indicators. The aim of these indicators is to inform the decoder when it receives the compressed transcoded signal that the coefficients of the frequency sub-bands signal have to be processed in a particular way. When no geometry transformation of the signal image has taken place, then the initial value of the indicator can be equal to 0, for instance. (This is derived from paragraph 73 to paragraph 77 (page 7 of *Berthelot*.)

Figure 2 depicts the transcoding device according to one embodiment of the invention and which is adapted to transcode the compressed file F.

According to paragraph 79 of *Berthelot*, the geometric transcoding device includes:

- means 6 of extracting symbols associated with the coefficients of the frequency sub-bands in each direction of the digital signal (as further mentioned in paragraph 80, the symbols are quantization symbols associated respectively with the coefficients of the signal of the frequency sub-bands obtained by spectral breakdown); these extracting means are adapted to perform an entropic decoding of the coded digital signal;

- means 7 of applying a geometric transformation to the symbols;

- means 8 of updating the indicators present in the file compressed data F and representing a normal or reversed order of the symbols respectively in the two directions of the digital signal; and

- means 10 of reconstructing the coded digital signal transformed geometrically in the compressed file F*.

It is further specified in paragraph 88 that the reconstitution means 10 are in this example entropic-coding means adapted to recompress the data file containing the digital signal which was transformed geometrically.

According to the Office Action, *Berthelot* discloses "selecting a data block in one of the compressed signals," in Figures 5 and 6 and paragraphs 64 to 72, and teaches "identifying, in the other compressed signal, a so-called dual data block which corresponds to the data block selected having regard to a given geometric transformation applied to this block, " in paragraphs 73 to 79.

According to the paragraphs quoted by the Examiner, the signal is compressed through spectral breakdown, quantization and entropic coding, successively. The compressed signal is then entropic-decoded, geometrically transformed (as explained above, and, in particular, with reference to paragraph 79) and further entropic-coded in order to recompress the geometrically transformed signal.

Applicants submit that these portions (and the rest) of *Berthelot* fail, firstly, to identify two steps: of selecting a data block in one of the compressed signals (either the compressed original signal or the compressed transcoded signal); and identifying, in the other compressed signal, a so-called dual data block which corresponds to the data block selected having regard to a given geometric transformation applied to this block. This is because in *Berthelot*, the steps of the method are performed only on the basis of one signal, i.e., the coded digital signal.

Secondly, *Berthelot* does not disclose a step of identifying, in an other compressed signal, a so-called dual data block which corresponds to the data block selected having regard to a given geometric transformation applied to this block.

As a matter of fact, *Berthelot* only mentions in paragraphs 73 to 77 the presence in the file compressed data F of the coded digital signal and indicators N associated with each direction of the digital signal. These indicators cannot be equated to a dual data block according to the method of Claim 1.

Further, in paragraph 79, means 6 of extracting symbols and which are part of the geometric transcoding device are adapted to perform an entropic decoding as mentioned in paragraph 80. Further, means 7 of the geometric transcoding device are adapted to apply a geometric transformation to the symbols.

From the foregoing, Applicants believe that it is clear that in the paragraphs cited by the Examiner, there is no disclosure of the step of identification as recited in method Claim 1, and accordingly believe that Claim 1 is allowable over *Berthelot*.

Independent Claim 21 is an claim corresponding to method Claim 1, and is believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.

A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as a reference against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims under examination in this application are each dependent from one or the other of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

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